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## **ABSTRACT**

A method of channel balance for a channel balance section in an WDM optical network with a starting node, an ending node and a plurality of intermediate OADNs (Optical Add Drop Node) first determines express wavelengths and non-express wavelengths starting from the starting node, then calculates TX (transmitter) power change which will bring the express channel performance to a target value and sets TX power using obtained TX power value. The method then moves to non-express channels by calculating TX power change for each non-express channel and sets TX power using obtained TX power value. Lastly, for each intermediate OADN, the method calculates TX power change for each added channel in each OADN and sets TX power using obtained TX power value.